

**Before the  
Federal Communications Commission  
Washington, D. C. 20554**

In the Matter of:

The Development of Operational,	)	
Technical and Spectrum Requirements	)	
For Meeting Federal, State and Local	)	
Public Safety Agency Communications	)	WT Docket No. 96-86
Requirements through the Year 2010	)	
	)	
Proposed revisions to Section 90.543	)	

**Joint Comments of Nortel Networks Inc. and EADS Telecom North America to Sixth  
Notice of Proposed Rule Making**

Nortel Networks Inc. (“Nortel Networks”) and EADS TELECOM North America <sup>1</sup> (“EADS Telecom”) (collectively referred to herein as the Joint Commenters) offer these comments to the Sixth Notice of Proposed Rulemaking, *The Development of Operational, Technical and Spectrum Requirements For Meeting Federal, State and Local Public Safety Agency Communications Requirements through the Year 2010*, WT Docket No. 96-86 (“Sixth NPRM”). The Joint Commenters support the Commission’s stated goals of increased competition, interoperability and increased efficiency. These comments reflect the Joint Commenters’ vision of Commission actions that will further those goals, particularly with regard to emerging technologies in the public safety and industrial arenas.

The Joint Commenters are both active on public safety matters in the Telecommunications Industry Association (“TIA”). Nortel Networks is a member of the TIA and is an active participant in the TIA Wireless Communication Division Private Radio Section

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<sup>1</sup> Several companies within the Nortel Networks corporate organization collectively hold a joint venture minority interest in EDSN SAS, a French company operating as EADS TELECOM that operates in the United States as

(“PRS”) and the TIA TR8 Mobile and Personal Private Radio Standards subcommittees. EADS TELECOM is a participant in the TIA TR8 Mobile and Personal Private Radio Standard subcommittee. As noted by the Commission in the Sixth NPRM, the PRS “recommendations were developed under TIA processes and therefore represent full consensus opinions without meaningful objections of any participating manufacturer.”<sup>2</sup> While concurring with the overall recommendations, the Joint Commenters highlight for Commission consideration the PRS admonition “that there are emerging technologies under development that may further affect the ACCP table recommendations.”<sup>3</sup>

### **Emerging Technology Issues**

Existing Part 90 regulations call for a 9600 b/s air link rate in a 12.5 kHz channel, producing a spectrum efficiency of 0.768 b/s/Hz. Past and current proposals in TIA TR8 have offered a 2-slot TDMA solution for 12.5 kHz channels with anticipated air link rates of 15-16 kb/s in a 12.5 kHz channel and a resultant spectrum efficiency greater than 1.2 b/s/Hz. The currently proposed ACP (former ACCP) values in the 12.5 kHz Mobile Transmitter ACP requirements table call for the first offset from center frequency to be 9.375 kHz, utilizing a measurement bandwidth of 6.25 kHz, and requiring a maximum ACP of -40 dBc.<sup>4</sup> These proposed ACP criteria will restrict the development of spectrally efficient technologies for deployment in the 700 MHz band.<sup>5</sup> The Joint Commenters propose a slight change in the offset

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EADS TELECOM North America. Nortel Networks and EADS TELECOM North America share the same policy perspective in this proceeding.

<sup>2</sup> Sixth NPRM, pg.3, footnote 9

<sup>3</sup> Id.

<sup>4</sup> Sixth NPRM, pg. A-7 12.5 kHz Mobile Transmitter ACP Requirements table and pg. A-9 12.5kHz Base Transmitter ACP Requirements table

<sup>5</sup> While the Joint Commenters specifically address the 12.5kHz channel ACP requirements in these comments, the Joint Commenters feel that identical changes to the first adjacent channel ACP requirements in the 6.25 and 25 kHz channels will facilitate the deployment of emerging technologies using such channel spacings in the 700 MHz band.

from 12.5 kHz center frequency and measurement bandwidth to allow future deployment of the identified 2 slot TDMA and other emerging and spectrally efficient technologies utilizing the narrowband channels of the 700 MHz band. As identified in the tables below, the Joint Commenters suggest that the measurement bandwidth for the first adjacent channel for 12.5 kHz transmitter measurements be changed to 5.9 kHz and the offset from center frequency be adjusted to 9.555 kHz.

### **12.5 kHz Mobile Transmitter ACP Requirements**

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACP (dBc)
9.55	5.9	-40
15.625	6.25	-60
21.875	6.25	-60
37.50	25.00	-60
62.50	25.00	-65
87.50	25.00	-65
150.00	100	-65
250.00	100	-65
350.00	100	-65
>400 to 12 MHz	30 (s)	-75
12 MHz to paired receive band	30 (s)	-75
In the paired receive band	30 (s)	-100

### **12.5 kHz Base Transmitter ACP Requirements**

Offset from Center Frequency (kHz)	Measurement Bandwidth (kHz)	Maximum ACP (dBc)
9.55	5.9	-40
15.625	6.25	-60
21.875	6.25	-60
37.5	25	-60
62.5	25	-65
87.5	25	-65
150	100	-65

250	100	-65
350.00	100	-65
>400 kHz to 12 MHz	30 (s)	-80
12 MHz to paired receive band	30 (s)	-80
In the paired receive band	30 (s)	-100

## **Conclusion**

In closing, the Joint Commenters urge the Commission to continue to consider emerging technology factors as rules are adopted in this proceeding. With this goal in mind, the Joint Commenters urge the Commission to adopt final rules consistent with the proposed first adjacent channel interference tables described above and thereby enable the unimpeded development of new and emerging technology in the public safety and industrial arenas.

Respectfully Submitted,

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